

August 30, 2006

Michael J. Koehler, Esquire
Nicholas, Perot, Smith, Koehler & Wall
2527 West 26th Street
Erie, PA 16506

RE: ICON PRO-FORM R-930
Space Saver Rider
Date of Incident: 1/18/03
Subject: Ryan Ford v. Icon Health
& Fitness
Our File #: 06-13371E

Dear Mr. Koehler:

I am continuing my engineering investigation and biomechanical engineering analysis of the injuries of minor Ryan Ford which occurred as he was on around Icon Pro-Form R-930 exercise equipment in the basement of his parent's home on January 18, 2003. I have prepared this correspondence as my initial biomechanical engineering report setting forth a summary of the results of my engineering evaluation at this date, which has included consideration of:

the deposition testimony of

Robert Ford taken on June 28, 2006, and

Laurel Jensen taken on June 28, 2006;

inspection and functional testing of the Icon Pro-Form 930 on
August 18, 2006;

product literature from Icon Health and Fitness;

internal Icon product literature (memos, test results ...);

United States Patent (5,695,435)-Collapsible Rider Exerciser;

File: 06-13371E

Page 2

Consumer Product Safety Commission literature relative to this equipment;

the report prepared by Barbara A. Gaines, M.D. dated March 28, 2006;

additional medical records;

nationally recognized scientific practice and engineering methodology (e.g., ASTM E 678-98); and

related file materials and information.

ENGINEERING DISCUSSION

As you aware, Ryan Ford, five years old at the time, was in the finished basement of his parents' home in the evening of January 18, 2003. While his father, Robert Ford, was assembling another piece of exercise equipment, Ryan apparently got caught in the Icon Pro-Form 930, which folded up on him, with Ryan 'inside' this machine. Mr. Robert Ford was able, after a few minutes, to free Ryan from this machine.

Mr. Robert Ford, during deposition testimony, stated (edited) that he purchased this machine (Icon Pro-Form 930) at Sears. He did not recall the date (pg. 12). A record, produced by Sears, documents that this machine was purchased on February 2, 1997 (pg. 13). His general practice is to read instruction manuals for products that he buys that are used by him or his children (pg. 15). He did not recall if he received a user's manual at the time of the purchase of this piece of equipment (pg. 19). He had set up this product the day before Ryan got hurt. He let Ryan sit on it and move the thing back and forth (pg. 22). Maybe for a year before this incident, this equipment had not been sitting out and/or available for use (pg. 22). He brought the machine 'out of mothballs' the day before Ryan's accident, wiped it up. The only thing he did was wipe it up (pg. 25). The only thing that didn't work was the counter, the display. He did not hear any recalls on this

File: 06-13371E

Page 3

equipment (prior to him using it) (pg. 27). He never made any retrofit on this machine, nor did he ever clip anything on the bottom of this product (pg. 27). His sister, Lisa Murphy, had this product at her house for a period of time, it could have been a few months, he was not sure (pg. 30). His sister did not have any notice of a recall for this product (pg. 30). His understanding was that recalls are posted on the store wall, you get it in the email or on TV (pg. 33). After the accident, they called the place (where it was purchased) and they were told there had been a recall (pg. 33). He never asked his sister or her husband if they were aware of any recall on this product. On the day of Ryan's accident, he was putting together some other exercise equipment. When he was doing that, that is when he found Ryan inside the other (Icon Pro-Form 930) machine. He had used (and set up) this product the day before (pg. 40). The day before Ryan's accident, he used this product for a full workout (pg. 40). The accident occurred in the evening. Ryan and he went down to the basement at the same time that day. No one else was with them in the basement (pg. 42). As he was assembling the other exercise equipment, his back was to her son. He didn't actually see the equipment collapse on his son (pg. 43). Probably his son just climbed on the Icon Pro-Form 930. There was no discussion between Mr. Ford and his son. Ryan had been on this piece of equipment the day before (pg. 44). Ryan was five years old at the time of this accident (pg. 45). Before this accident, he did not hear Ryan using the machine (before the accident) (pg. 45). His back was turned for an instant, and the accident occurred (pg. 46). He didn't hear Ryan doing anything (before the accident). Mr. Ford was about fifteen feet from Ryan, at the time of the accident. Mr. Ford did not feel there was anything dangerous about this product (pg. 47). In reviewing the warning (in the product literature) Mr. Ford stated that he would have made his own decision regarding whether or not the product was safe, it depends on what they're saying a small child is (pg. 48). Ryan was tall for his age (five years old at the time of this accident). If he had read the warning he would have, more than likely, allowed Ryan to be on the product (pg. 49). On the day before the accident, Ryan was on the machine a couple of minutes (pg. 49). Ryan did not have any difficulty in operating

File: 06-13371E

Page 4

the equipment. His feet reached the pedals. He was able to use the machine the way the product is designed, with his feet on the pedals, and his hands on the handlebars, the day before the accident. On the day of the accident, Mr. Ford did not hear or see any movement of the handlebars before the accident (pg. 50). At the time of the accident, Ryan was pinned between the seat and the handlebars, his chest was pinned between the seat and the bars. The handle bar was around his chest. He was lying back in sort of a prone position, he was pinched between the seat and the handlebar (pg. 51). He got Ryan out by lifting up the seat and then bringing the bars against, because the bars wouldn't come apart until the seat got up. Mr. Ford (at that time) was calling for his wife (pg. 51). It took Mr. Ford a little bit of time to get Ryan out of the product, about a minute (pg. 52). Ryan wasn't breathing, he was blue (after he was removed from the product (pg. 52). Ryan was laid on the floor, he rubbed his chest, then he started gasping for air, 911 was called (pg. 53). The ambulance came and took him to Hamot. He was later airlifted to Children's Hospital in Pittsburgh (pg. 55). He remained in Children's close to a week (pg. 57). He thinks Ryan's chest was red (after getting him out of the product).

Mr. Laurel Jensen, during deposition testimony, stated (edited) that his current position with Icon Health and Fitness is director of product safety (pg. 5). He has had that position since 2002. For the Icon Pro-Form 930, during the testing procedures, testing was conducted with human beings operating this equipment (pg. 17). During this testing he never saw anything or heard of any reports of a unit ever collapsing in the testing of the unit (pg. 18). These testers are adults, young collage age kids, as well as older people (pg. 18). During this developmental testing of this product, it did not come to anyone's attention that there was a problem with this exercise bike collapsing into the storage position while being used by some one (pg. 19). All of these product testers would have been over the age of 18 (pg. 19). The equipment is not intended to be used by children, it has wheels that roll on surfaces (pg. 22). In reviewing the child precaution situation (warning label), Mr. Jensen could not find any information regarding the unit collapsing while in use (pg. 23). The product continued to be sold for a number of months after the

File: 06-13371E

Page 5

Consumer Product Safety Commission recall was announced (pg. 27). The product was sold (after the recall) with a retrofit, and also a change in the structure after that (pg. 28). The original machine was not sold with a stop tab (pg. 29). When a consumer bought a Pro-Form 930 after the recall the stop tab was part of the machine. As part of the recall, the consumers were to get a kit to attach a stop tab to the machine themselves (pg. 30). There was a design change made to the machine to incorporate the (stop) tab into the structure of the machine (pg. 30). This tab that was on the machines was welded onto the machines. He does not know how long after this product (initially) went to market a complaint was received. They (Icon) then began working to understand how it (the sudden collapse of the machine) could happen, and what could be done to prevent it. The R&D department looked at ways that they could change the machine to prevent that (folding up) (pg. 37). It came to their understanding that the wheel could go over the end of the support tube for the wheel and go into the fold-up mode (pg. 38). The handlebars had to be a few inches, very few inches before the front wheels would go over the edge (pg. 39). It was also discovered that when the handlebars could not be removed from the seat (once the machine collapsed) without raising the seat into an upright position. In the prior product testing (before the recall) it was not evident (to Icon) that a person could be on the seat and bring the handlebars close enough to get it to go in the storage position (pg. 41). Mr. Jensen, after looking at the subject machine for a few minutes, didn't really look close enough to say whether it (the machine) had been altered or not (pg. 44). At some point the Consumer Product Safety Commission approved the retrofit (after the initial design was found to be not strong enough) (pg. 53). The retrofit used 11 gauge steel. The final version of this retrofit used two screws that actually held it in place (pg. 54). This stop tab went on only one side. After the stop tab was installed on the machine, the user had to lift the handle bars and the seat up an additional amount to go into the storage position (pg. 60). Along with the (retrofit) stop tab, the consumer received an instruction sheet (pg. 61). No independent testing lab tested this product (independent of Icon) (pg. 66). The recall (initiated by the CPSC) happened in July 1997 (pg. 73). In the

File: 06-13371E

Page 6

initial design of this product, Icon considered whether children would be using or be attracted to this product, so they put warnings 'in the manual' to advise people who purchase the unit to keep children away from it (pg. 75). We're aware that kids are attracted to a lot of things, so it's appropriate to put warnings if the product is not designed for a child (pg. 75). He had never seen a situation where he could understand how a person who is normally using a product could make it do that (handlebars could come close to the seat and collapse the product) (pg. 82). In the pre-testing of the product (before initial sale) we (Icon) saw no evidence that a person could pull the handlebars far enough back to where they could ever get it to go into the fold-up position (pg. 87). The retrofit device was added to the product because they had the complaints and felt that something needed to be done, so the bracket was proposed and presented to testing to evaluate (pg. 88). The complaint was that the unit had gone into fold-up, they (Icon) just decided to address the situation quickly by coming up with a bracket and a change to the machine (pg. 94). Someone (at Icon) made a determination to come up with a bracket to retrofit the machine, it could have been the testing department, R&D, Mr. Jensen was not exactly sure (pg. 97). In normal operation of the machine, the handlebars start away from you, as you push with your legs, you pull the handlebars toward you, then there's pressure, you basically provide resistance as they (the handlebars) go back out and your legs fold back up. In a normal adult, using this machine, the handlebars have a tendency to roll down towards your stomach area (pg. 98). If a user could get four inches between your stomach and the seat (when you pull the handlebars back), it's possible the collapse could occur (pg. 100). Mr. Jensen had no knowledge, or could not refer to any documents that showed Mr. or Mrs. Ford received any information regarding the product recall (pg. 100). Nowhere in the user's manual does it instruct product owners to keep children away from the product, it refers to small children. Mr. Jensen would consider a five year old to be a small child (pg. 105).

Consumer Product Safety Commission (CPSC) correspondence to Icon Health & Fitness, Inc. (stamped March 31, 1997) references consumer complaints that the handle

File: 06-13371E

Page 7

of the exerciser (Model No. 831.2876210) may collapse trapping the user between the seat and the handle and jamming the user's legs against the seat. The Commission, in order to 'assess accurately the potential safety hazard', requested information from Icon. Ultimately, the CPSC approved of a 'remedy' proposed by Icon-Joint press release, notified consumers of recall and Icon will provide a repair kit with instructions (7/97).

The press release from U.S. Consumer Product Safety Commission (July 14, 1997) refers to the subject machine (Pro-Form 930). The machine was designed to close horizontally for easy storage. 'In the case of the reported injuries, when the handle bar was pulled against the seat during use, the machine unexpectedly closed into the storage position causing injuries'. 'Consumer's should stop using the machine immediately and call Icon Health & Fitness Inc'.

The Pro-Form R-930 User's Manual includes the following 'Important Precaution' which indicates that '5. Keep small children and pets away from the R-930 at all times'.

The 'Important Assembly Update' describes the procedure to install the Stop Bracket (this was the retrofit part designed by Icon to prevent the unexpected closing of the machine).

Icon internal literature (7/30/96) Memo Reference #96093 describes the caution decal that 'testing is requiring to be place(d) on the backside of the rear stabilizer.... Must contain the following information (1. Never allow children to play on or around the unit.).

My inspection of the machine revealed the structure of the machine appears unremarkable. There is some minor corrosion present on some of the screws. The area that the (retrofit) bracket would have been on does not show any witness marks. The subject machine was not equipped with the retrofit 'stop bracket'.

File: 06-13371E

Page 8

The machine has a hydraulic cylinder (in the front underneath the 'body') that is adjustable, which controls 'pull resistance' as you pull the handlebars closer to your body. There is another adjusting device, near the bottom rear of this 'body', that adjusts the 'push resistance' as you push the handlebars away from you. The seat can be adjusted (front to rear) by means of a knob.

In operating the machine, it was seen that as the wheels (that ride on a curved lower track) move forward (caused by pulling the handlebars closer to you) the distance between the seat and the handlebars is reduced. During operation, a position (of the wheels) was achieved where if the wheels rolled over the end of their track, then that distance between the handlebar and the seat essentially was (suddenly) reduced to zero. When these wheels are in position or just about to roll over ('metastable equilibrium'), the angle that the base that the seat is attached onto makes about 25 degrees (with the horizontal). When the wheels are just about at the end of these tracks, the structure is stable, with about 5¼" between the seat and the bottom surface of that V in the handlebar. If the wheels are now moved slightly (approximately 1/16" beyond that position), the structure suddenly collapses with the handlebars coming into contact with the seat. This collapse results in a significant level of force 'holding' the handlebars to the seat. In order to separate the handlebars from the seat, the handlebars must be raised to an upright position, and the product can then be 'unfolded' and returned to its original position.

A label on the bottom says, Sears Roebuck & Co., Hoffman Estates, IL, model #831.28775, serial #G63350626, for service call 1-800-736-6879, 8/96WB, patent pending, other patents may be pending.

In particular, my professional engineering and biomechanical engineering investigation have determined at this date that:

File: 06-13371E

Page 9

1. the product (Icon Pro-Form R-930) was purchased by Mr. Ford reportedly in early 1997;
2. Mr. Ford did not recall if he received a user's manual with this product;
3. the Pro-Form R-930 User's Manual, under 'Important Precautions' lists 'Keep small children and pets away from the R-930 at all times';
4. it is reasonable to conclude that Icon determined that small children could be injured if they were in close proximity to the R-930;
5. the inspected product did not have any safety related ('Precautions') information permanently affixed to any part of its structure;
6. the Consumer Product Safety Commission apparently first notified Icon of safety related issues with respect to the R-930 in March 1997 (after receiving consumer complaints);
7. Icon ultimately (in conjunction with CPSC) designed a retrofit 'stop bracket' to be applied (post sale) to existing R-930 products;
8. Icon designed new R-930 products to have an integral welded 'stop bracket' (from the factory);
9. product inspection and testing confirmed that during normal use the wheels (on the lower movable frame) could be moved beyond the edge/end of these curved tracks, resulting in a sudden collapse of the frame;

File: 06-13371E

Page 10

10. initial medical records note that 'pt was found wedged in an exercise machine', and that 'patient wedged in between areas of an exercise machine';
11. the initial design of the R-930 (without the 'stop bracket') allowed for the sudden collapse of this product during normal use;
12. this sudden collapse results in the user being trapped between the lower surface of the handlebars and the seat;
13. after this collapse, the product must be 'unfolded' by raising the seat, and then moving the handlebars;
14. Mr. Robert Ford's description of this incident, and the medical records, are consistent with Ryan Ford being on or around the R-930 and pulling the handlebars close to his body, resulting in a sudden collapse of the structure of the R-930;
15. during design/testing, the potential for sudden collapse ('overtravel' of the lower wheels on the curved track) should have been foreseeable to Icon Health and Fitness;
16. Icon did not incorporate nationally recognized standard practices for product safety labeling in the design of this product (i.e., ANSI);
17. this overtravel of the lower wheels could have been prevented by incorporating (in the original design) a 'stop bracket' similar to what was added after the consumer complaints and recall;
18. this machine (product) was defectively designed and created a substantial hazard and risk of injury to users; and

File: 06-13371E

Page 11

19. this product as designed and manufactured was unreasonably dangerous and defective and created a serious risk of injury especially to children such as minor Ryan Ford.

Conclusions

In summary, it is my professional engineering and biomechanical engineering opinion at this date with reasonable scientific and engineering certainty, following nationally recognized scientific practice and engineering methodology, that responsibility for this incident and the injury of minor Ryan Ford relates directly to the unsafe design and manufacture of the R-930 product by Icon Health & Fitness (for the reasons discussed above).

I reserve the right to supplement this initial engineering and biomechanical engineering report if further detail or comment is requested at this time or a later date, and as my engineering evaluation continues and any additional information becomes available. File materials including photographs are to be considered a supplement to my report, and may be utilized by me in support of my conclusions.

This is,

Respectfully Submitted,

LAWRENCE J. DOVE ASSOCIATES

By S/Howard Medoff
HOWARD P. MEDOFF, PhD., P.E.

HPM:wk